

Abstract of the Disclosure

The “what” and “how” of policy-based management is integrated in a single framework that enables a system administrator to specify service-level quality of service (QoS) goals for automatic enforcement. Automatic enforcement of the specified “high-level” QoS goals is realized through the execution of “low-level” rule-based or procedural logic, without the client having to specify the low level logic. Specifically, one embodiment of the invention employs a management server including a graphical interface that allows a user, e.g. a system administrator, to easily specify parameters for service-level QoS goals. A QoS goal is defined by the administrator selecting a client, a service and a QoS expression that specifies the desired service-level QoS. The state of the network is monitored and one or more defined QoS goals are selected for evaluation in a continuous process. The QoS delivered for the selected goal is determined and compared to the desired QoS for the selected QoS goal. Then, prescribed actions are taken or not depending whether the delivered QoS is equal to the selected QoS goal. If not, and the delivered QoS exceeds the selected QoS goal, a set of actions is determined and executed to reduce network resources assigned to the client and service of the selected goal. Similarly, if the delivered QoS is worse than the selected QoS goal, a set of actions is determined and executed to increase network resources assigned to the client and service of the selected goal.